

# DESIGN VALUES FOR EXPERIENCE

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## ABSTRACT

This chapter addresses the formation of values through experiential learning and the incorporation of otherness in the subject Architectural Design IV, section 425, of the Architecture School of the University of Lima. The methodology and steps carried out within the practical teaching-learning process will be presented as a replicable good practice in order to raise awareness about the fundamental role that the user has in any architectural project. The course raises students' awareness about the need to include a diversity of users (with and without disabilities), and about accessibility and the concept of universal design in the development of their design proposals. This methodology has been used since 2018. This chapter is part of the author's doctoral research. It developed under a qualitative research paradigm using multiple observation techniques. The selected populations are students of the Architecture School of the University of Lima and the sample corresponds to the students enrolled in section 425 of the course Architectural Design IV. Depending on the cycle, there can be 12 or 24 students.

**ARCHITECTURAL EDUCATION, INCLUSION, VALUES IN EDUCATION, SOCIAL  
RESPONSIBILITY, OTHERNESS**

# 1. INTRODUCTION

**M**ichel Foucault tells us that 'An experience is neither true nor false: it is always a fiction, something constructed, which exists only after it has been lived, not before; it is not something 'real', but something that has been reality' (Foucault in Faubion, 2001: 243). This article addresses the formation of values through experiential learning and the incorporation of otherness in the subject Architectural Design IV, section 425, of the Architecture School of the University of Lima. This is important because...

Architectural education in Peru lasts five years. My students, in the subject Architectural Project IV section 425 of the University of Lima, belong to the second year. This is a compulsory course and belongs to the area of Architectural Design. During the previous courses in this area, students acquire knowledge about architectural composition and representation, function, anthropometry, and elaboration of the architectural programme. As Carolos Labarta explains in the presentation of the book *Teaching Methodology of the Architectural Project* (Labarta & Bergera, 2011), the subject of the architectural projects is understood as the axis of training where other subjects in architectural education converge. This has traditionally been the way we have understood architectural design subjects in Peru.

The learning of the project, with all the load of its creative and poetic condition, cannot be transmitted without a strong and up-to-date conviction in the content of the teaching itself. Teaching becomes the intravenous transmission of enthusiasm, of passion guided by reason. Going through the other side of the mirror, teaching should become an enthusiastic and intoxicating game, whose satisfactions will be proportional to the objective difficulty of the challenge (Labarta & Bergera, 2011: 14).

What would happen if we understood education in a reciprocal way, in which architectural education feeds on knowledge from other areas, but also gives those areas new knowledge? What would be the element or situation in which all the subjects of architectural education come together? I dare to propose that this meeting point are the users.

How aware are architecture students about the diversity of users and their needs? How to make them understand the importance of users in any architectural project? Users are the reason why architecture exists and also the reason it changes. How do we prepare our students to understand the complexity that surrounds every human being? A complexity that entails certain design variables, because we do not only have different interests and needs, but also different capacities and abilities and therefore, different ways of perceiving architectural space and of relating to our peers. How do we get our students to understand and respect these differences?

I believe that the best way for students to become aware of the implications of their professional practice is to confront them directly with reality through different experiences that the object offers them. This chapter presents these experiences as approximations to encounter this reality, especially the reality experienced by a group of people who are often forgotten and neglected in architectural projects, that is, people with disabilities. The course confronts students from the outset to get out of their comfort zone and puts them 'in the other's place' which is finally what an architect should do every time they start a new design. The different experiences are opportunities for reflection for each student, who in turn go through the different stages of learning (of artistic disciplines) that Asger Jorn talks about in 'Notes on the formation of an imagistic Bauhaus', (quoted by Juarez in Labarta & Bergera, 2011): stupefaction as the initial stage where something surprises us, experimentation as personal work, and finally, possession as the result of the internalisation process. All these experiences lead to design strategies that allow students to approach an architectural assignment aware of the importance of knowing and understanding the users.

## **2. STUPEFACTION AS THE INITIAL STAGE**

The course has an ambitious goal, that is to make students aware of the importance of understanding the diversity of users. For this, they must first recognise themselves as individuals who are part of a group. The first step to achieve this is to 'break the ice' (Figure 1). This is important because it allows students to meet and interact with the rest of the course members (who they will see and with whom they will work for 16 weeks, 9 hours a week).

Our learning begins with a review of the bibliography on 'universal accessibility' and 'universal' or 'widely accessible' design, as well as national regulations on those topics. This allows students to understand the importance of thinking about accessibility from the outset and, at the same time, realise that, as far as regulations are concerned, we still have a lot to do in Peru. They then see the need to investigate and review the regulations of other countries in order to make a comparison and be able to recognise good criteria in terms of accessible design. But this is not enough to make architecture. It is not enough to understand how the users use the spaces and how the spaces that the architect designs affect the development of life in different aspects. This is how the next step in the methodology of the course is given: experimentation.

Lima is a city where most sidewalks measure between 80 and 100cm wide. Where it is 'normal' to see parked cars on the sidewalks. Where it is 'normal' for the pedestrian to stop at every corner, every traffic light, and every intersection to

give way to vehicles. Where it is 'normal' to think about expanding car lanes before expanding the spaces where people circulate. Jane Jacobs already said (in an interview conducted by Eve Auchincloss and Nancy Lynch) 'We are sacrificing all kinds of services in favour of cars. I think we could reduce their number by giving way to other needs we have. It is about a change of values' (Auchincloss & Lynch, 2019: 12).

The pandemic showcased the lack of awareness by authorities of the kind of people who live in cities like Lima. It made it clear that no thought was given to how these places of circulation that people pass through on a daily basis should be. What do they find on the way? Can they find rest points along their route? Many times, there are no sidewalks and people must walk along the road hoping that no car runs them over.

'When, consequently, pedestrians are forced to keep to the right of the street to traverse it, the freedom of movement has more or less been lost. People no longer meet, but walk in line one behind the other. The overcrowding is too great' (Gehl, 2017: 148).



Figure 1: Group presentation development Architecture Project IV section 425, 2019. Photo by author (2019).



### 3. EXPERIMENTATION AS PERSONAL WORK



Figure 2: Students of the course learning to be guided using the tracking technique. Photo by author (2018).

Many students, at this point, had not yet become aware of the diversity of users that inhabit cities and with whom we interact to a greater or lesser extent every day. Few knew, within their social circles, a person with a disability. This stage in the course is called 'Experimentation' and is composed by different activities exploring otherness as 'personal work' (Figure 2).

In the first activity, the students tour the city of Lima using a wheelchair. They choose the area to visit and do it during the weekend, outside class hours. The only condition is not to get up from the wheelchair and try to make all the routes that the visited place allows. This activity is done in pairs and has two moments. At first, student 'A' is in the chair and student 'B' is the one who pushes the chair, then they exchange roles so there is an exchange of experience. In a second step, each one goes alone in the chair and must push the wheels by themselves to be able to move forward. The activity closes in the classroom with the exchange of the experiences obtained, addressing a list of all the problems or inconveniences faced.

In the second activity, the students visit different museums in Lima. They decide which museum to go to and use the methodology applied in the first activity. In the tour of the museums, they realise that many not only do not have entrance ramps, but also that the routes inside do not allow comfortable movement in a wheelchair. The museums that do have access ramps do not have them located at the

main entrance where the museography begins. The ramps, when there are any, are located in the middle or at the end of the route. This completely affects the visitor's perception of what is on display. Something as simple as the location of a ramp can completely change the user experience. Added to this are different situations such as, for example, that the exhibited objects are well above the height of a person in a wheelchair. These two initial activities aim to recognise the importance of accessibility for people with physical disabilities.

The following activities seek to understand the importance of sensory accessibility. In order to carry them out, we visited the C.E.B.E. San Francisco de Asís located in the district of Santiago de Surco, Lima. This visit is coordinated and organised in advance with the director, a team of teachers, and psychologists from the C.E.B.E. mentioned. The activity begins with a presentation by the management about the history and mission of the C.E.B.E. Then there is a guided tour of the facilities by a team of teachers appointed by the management. Finally, the activity directed by the team of psychologists from C.E.B.E., which consists of students putting themselves in the place of a person with total visual impairment and learning to move using a guide cane, learning to use the podo-tactile floors and the 'tracking' technique as a method of tactile orientation. All activities are carried out within the C.E.B.E. and are guided by the team of psychologists at all times. At the end of these first activities, architecture students learn to be sighted guides, which means learning to guide a person with total visual impairment. They learn to offer help, to place the arm so that the blind person can hold on and finally to accompany and guide the person with visual impairment. From experiencing 'otherness', they learn to respect the time and space of 'others'.

These activities allow the architecture students to be aware of their neighbours and the need for accessibility that exists. The important thing is not only to experience the city and architecture from the perspective of 'otherness', but also that, through these experiences, students become aware of their own bodies, their own senses and realise how little attention we pay to our senses, as well as how little we know how to orient ourselves and guide ourselves using something other than sight. Moreover, they understand how little space we give to spatial experimentation through our senses, our bodies.

The pandemic, as we already know, changed the way we relate to others. But with the pandemic also came the virtualisation of classes, a first-time experience in the Architecture School of the University of Lima. Virtuality brought new possibilities for experimentation, with few limitations (Figure 3). The students received a visit in class from different architects around the world who shared with them their design and academic experience around accessibility and universal design. Teachers from C.E.B.E. also visited us in class, carrying out different awareness activities with students in a virtual way

## 4. APPROACH TO THE USER AS A PROCESS OF INTERNALISATION



Figure 3: Virtual sensitivity workshop at the course Architecture Project IV section 425. Photo by author (2020).

Understanding the importance of contact with our own senses and recognising that we are all part of larger groups, students become aware of the importance of connecting with users and understanding their needs. The users with whom we interact in the course are children, since there is no more honest perception than that of a child. To know something, to understand something, children are not afraid of experimentation, and they do it using all their senses. To contact children with disabilities, we made a second coordinated visit to the C.E.B.E. San Francisco de Asís (Figure 4). For many architecture students, it was the first time they had seen or approached a child with a disability. Probably, without the previous experiences, the reaction to the first meeting would have been very different, many would have averted their eyes or turned away. How easy it is to look the other way and how often we do that. I was pleasantly surprised by the naturalness with which my students talked, interacted, and gave themselves the opportunity to be human, to meet others, and learn from these approaches.

There is no better way to establish contact with others than doing it naturally in everyday life and that is why for this stage I coordinate and organise a joint visit to a museum in Lima. Museums and their characteristics in terms of universal accessibility, at this point in the development of the course, are no longer foreign to my



Figure 4: Visit to a museum in Lima, students from the University of Lima and C.E.B.E. San Francisco de Asis. Photo by author (2018).

students. Each student of architecture in my charge accompanies a student of the C.E.B.E. in this experience.

We were surprised that after walking for a long time around the museum, where everything is protected by glass, Walter, a boy with total visual impairment, asked us if the only thing they were going to 'see' was glass. For a totally visually impaired child, a museum of this type is nothing more than a series of spaces where 'there is nothing'. There is no spatial or sensory experience. In that sense, why would museums be important for those children if they are spaces where 'there is nothing'? The museum we visited temporarily prepared a room with a series of replicas where children, for the first time in their lives, could touch objects inside a museum. Feel the weight of the object, the material, the temperature, smell, etc. The senses allowed them to enjoy a complete experience for the first time.

The inclusive museum movement arises from the need to promote cultural democracy. The inclusive museum is an organization, ambitious in its spirit and purpose, which aims to facilitate a multisectoral and interdisciplinary dialogue that transforms museums into civic spaces for the protection of the tangible and the intangible; of the natural and the cultural; and both movable and immovable heritage (Galla n.d.).

For their part, the architecture students, through the experience of real proximity, were able to realise how the architecture we design directly affects people. It affects whether they feel comfortable or not in the space, but it also influences how a person relates to others in that space. Without understanding our users, we will not be able to understand our role as designers.



## 5. POSSESSION

### AS THE RESULT OF THE INTERNALISATION PROCESS

It is only then, after all these activities and experiences, that the students begin their design process. They all receive the same architectural commission. They all perform the same preliminary steps: analysis of the context, analysis of the plot, understanding of the typology through the analysis of references, etc. Each design decision will be defined by the different experiences carried out throughout the course and, above all, how each of those experiences personally affects each student, each future architect.

We believe that the consultations and discussions should take place during processes and not during deliveries. As students that we once were, we are very clear that the doubts, insecurities and uncertainties occur almost entirely in the moments of project production (Eliashev, Garrido & Encabos 2014: 61).

The subject not only generates concerns and discussions throughout the design process (Eli-ashev, Garrido & Encabos 2014) among the enrolled students, but also the reflection of transversal learning between the design subjects and the other academic areas in the curriculum. For this, I call on teachers from the different academic areas who attend the class for a week to listen to the advance presentations of each student. The comments are focused on understanding how the design is linked to different variables and knowledge that they acquire in other courses, for example, structure, materiality, environment, among others.

Students continue to work on their projects and present their progress again on two separate occasions to external guests with different interests and/or professions (Figure 5). In the first presentation, the guests are people with physical disabilities and in the second they are people with sensory disabilities. The objective of these visits is for users to be able to comment with the students, from their own experience, on the difficulties or potentialities they find in each project. The guests we have received so far have been psychologists referred from the C.E.B.E. and part of the national para-sports tennis team. The guests also share their experiences and difficulties when traveling through our city through a fluid and unstructured conversation. It is not a participatory design since they do not intervene in the design process, but there is a joint reflection that gives rise to the improvements and adjustments of each project. These activities make the students gain more confidence about their project decisions.

People with physical disabilities give their opinion regarding the physical accessibility of the project. People with sensory disabilities, for their part, comment on how easy it is to be able to navigate in the different spaces considering the proposed reference elements. For example, podotactile floors and different textures that allow



Figure 5: Explanation of the progress of the project. Photo by author (2019).

tactile exploration to be able to orient oneself in space. The odours of the proposed vegetation serve as reference and guides to identify areas within the project. The smell of food can refer us to a dining room or kitchen, the smell of aromatic plants can refer us to an orchard or a garden, etc.

The important thing is that, throughout the course, students have a realistic approach to their professional practice and have real and direct contact with users. This gives the different proposed projects greater consistency and support. This allows students to become aware of their role as designers.

## 6. INCLUSIVE COMMUNICATION OF THE ARCHITECTURAL PROJECT

The course tries to go one step further. We talk about inclusion and equity; we talk about all users being able to enjoy accessible architecture and we also talk about inclusive communication of the architectural project. What are the tools that architects use to show and explain a project to a client? What if your client is someone who won't be able to see your printed plans and PowerPoint presentations? What if you are designing for a child? Is the user involved in the design process? With what tools?

The course not only works with traditional tools, such as drawn plans (either by hand or computer) and cardboard or balsa wood models. The students learn to work with haptic planes, planes with reliefs and different textures where each one represents different areas of the project. These plans are drawn up for each level of the



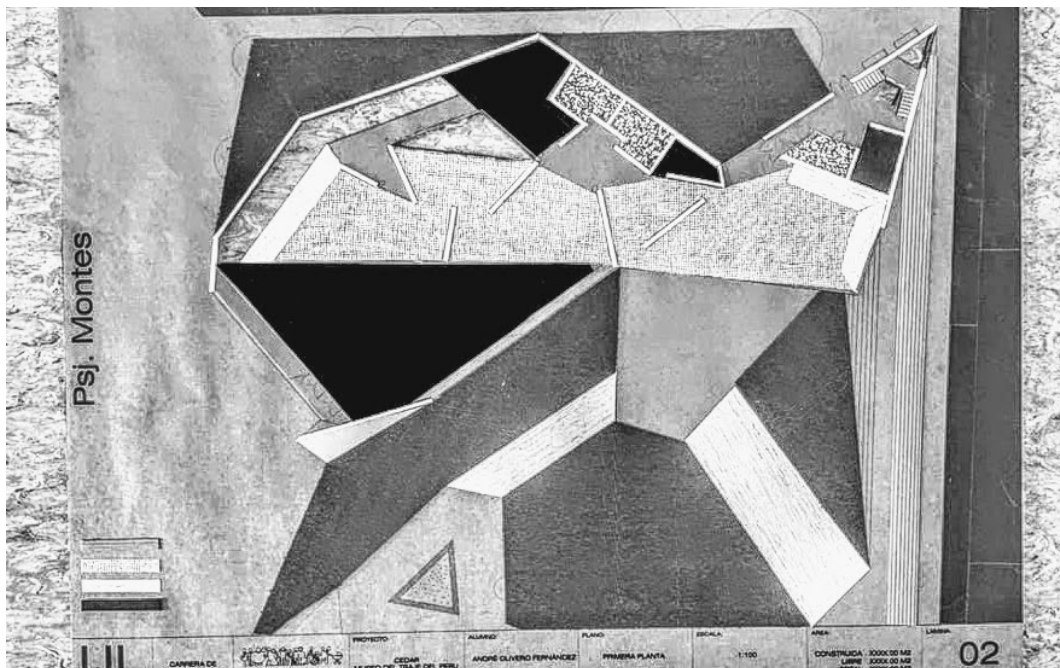


Figure 6: Haptic plan by student Valeria Lissa. Photo by author (2020).

project and in the process, progress is shown to people with total visual impairment or low sight in order to verify if the information is being transmitted correctly.

The reliefs serve to indicate where there are walls or partitions or to locate objects that do not allow circulation to flow.

Each plan has a legend that indicates the areas of the project. This legend is also worked in braille. Students learn to use digital fabrication technology to achieve inclusive communication of the architectural project. The University of Lima has a Fabrication Lab on campus to which students have access. There they learn to use 3D printers, laser cutters and CNC routers with the support of technical staff. 3D printing is used quite a bit in the course to make models that are more resistant to tactile exploration. The pieces are made of laser-cut cardboard that allows the student to visualise the project and make modifications in the process. The final pieces printed in 3D are shown to people with low sight and total visual impairment who carry out tactile exploration and, together with the haptic plans with legends in braille, manage to understand the architectural project from the development stage.

Students also prepare brief descriptive reports of the project printed in braille. All this information constitutes the delivery of the architectural project on the subject. This is the information that the invited jurors review during the development of the project and the final delivery.

The students understand that their responsibility as architects is not only the good design of accessible spaces that allow all users to have different spatial experiences - it is that they can be perceived by the different senses - but also to correctly

communicate the development of the project to whoever will use it. Therefore, the students prepare for 16 weeks to achieve an architectural project that is accessible in all parts of the process. A project that is designed for people from start to finish.

## 7. FINAL REMARKS

There are 16 weeks of continuous learning, awareness, and understanding of what it means to be an architect, but above all, of contact with people. We often see the training of architects taking place within the confines of the school, without exposing students to the real world, without real contact with users. We often see that the first time many young architects will face users is at the end of their studies with the first professional architectural commission. Shouldn't we learn to interact with these users from the outset, starting in undergraduate training? Shouldn't we encourage empathy and inclusion in our students? With what values do we train our students? Do we explicitly educate our students on values like that?

The course ends after 16 weeks with the delivery of the final grade. At this point, we make one more visit, probably the most significant of all. We visit again the children of the C.E.B.E. San Francisco de Asís in their school, only this time the architecture students bring their models and haptic plans made for the course, and share their projects with the C.E.B.E. students (Figure 7). For many of these children at C.E.B.E., this is the first time someone talks to them about architecture. It is the first time for all of them to follow a presentation explaining the story of an architectural project. For architecture students this presentation is different. This presentation is, symbolically speaking, a commitment. A commitment from future architects to the future generation of users of our city for thinking and making an architecture that is inclusive and accessible. Architecture for all.

What is noteworthy about this experience is that all the students attend this last meeting after being given their grades. None is missing.

With the passing of time, more and more people have joined this experience. I believe that it also shows the sensitivity that is achieved in students to be able to approach people and try to really understand their needs and different characteristics, which can result in inclusive design strategies and even provide crucial guidelines for their architectural proposals.

The learning and work of an architect goes through the complexity of sensory experience, and little by little, forms are restored, procedures are adjusted, in an almost endless process. And perhaps, in this whole process it is necessary to start with an elementary experience: 'open your eyes'. Open your eyes to the world and to inherited knowledge so that each one of us, with our own identity, can propose new ways, new 'forms' of establishing an open and fruitful dialogue with the medium that is architecture (Juarez 2011: 33).





Figure 7. Explanation of the final project to a girl with total visual impairment. Photo by author (2019).





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